2006 VISN 12 Residency Project

Title of Project: Evaluation of the Use of Ezetimibe in a VA Medical Center-2006

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Residency Type: General Pharmacy Practice

Year of Residency Completion: 2006

Residency Practice Site: North Chicago VA Medical Center

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Investigator(s): Emily Pearse, PharmD (primary investigator) and Janet Lederman, PharmD

Objective(s): The primary objective was to assess the efficacy of ezetimibe via LDL according to the ATP III guidelines as monotherapy and in combination with other lipid lowering agents in patients with dyslipidemia. The secondary objectives were to evaluate the safety of ezetimibe therapy, evaluate adherence to the VA criteria for use, and determine if the use of concurrent and past anti-lipemics was appropriate.

Methods: This study was a retrospective chart review evaluating the use of ezetimibe at the North Chicago VAMC. Patients were included in the study if they had documented hyperlipidemia and had received a prescription for ezetimibe between February 1, 2005 and February 28, 2006. Patients were excluded from the study if they did not have lipid panels performed at the North Chicago VA Medical Center or the results from private facility were not documented in the patient's chart. Using the computerized patient record system, the following information was obtained from the patient's record.

1. Demographic information gender, age, and race
2. Current dose and duration of therapy of ezetimibe
3. The use of previous and concurrent lipid lowering agents (statins, bile acid sequestrants, niacin, etc.), including dose, duration of therapy, and reason for discontinuation
4. Results of LDL cholesterol level within a year of initiating ezetimibe
5. Results of baseline LDL cholesterol level before ezetimibe was initiated
6. Patients LDL goal based on past medical history and clinician judgment
7. Date and results of last liver function tests.

Outcome(s): One hundred and seventy three patients met the inclusion criteria and were included in the study. Ezetimibe showed an absolute reduction in LDL of 20.4%± 22.1%. The monotherapy group experienced a 24.7% ±14.5 reduction in LDL but only 30.3% of these patients had reached their goal LDL. The combination group experienced a 19.5% ± 23.3 reduction in LDL and 60% of these patients had achieved their goal LDL. In the combination group, over 80% were being treated with statin combination therapy with simvastatin being the most popular agent. In regards to monitoring, the average time since last lipid panel was 6.4 months and 91.2% of patients had been checked within the year. The average time since last LFTs were measured was 7.1 months and 88.8% had been checked within the year. In regards to safety there were only 2 reported ADRs to ezetimibe documented and only one patient that had experienced LFTs 3x upper limit of normal. In regards reasons for discontinuation of other cholesterol lowering medications 79% had discontinued treatment because of an ADR, 13% because of a treatment failure, and in 8% the reason was not stated. A subgroup analysis of patients in regards to age showed that less than half of those patients in the ≤55 age group had achieved their LDL goal in contrast to those patients in the ≥76 age group where almost 80% had achieved their LDL goal.

Barriers/Limitations: 1) Retrospective study design, 2) Predominantly male population, 3) Predominantly white population, 4) Many ADRs did not contain reaction type, and 5) Many patients seen annually for follow-up and refills (hard to track efficacy and reasons for changing therapy)

Conclusion(s): The absolute overall reduction in LDL was 20.4% ±22.1 which was not statistically significant. Only a little over half of the patients on ezetimibe have reached their goal LDL, however more patients on combination therapy reached their LDL goal. The subgroup analysis of patients in regards to age showed that the older patient population had a greater percent of patients that had reached their LDL goal. Ezetimibe proved to be a safe agent and most patient's lipids and LFTs were monitored frequently.

Future Directions if applicable: none as of to date